I. **Course Title**  
Biochemistry Lab

II. **Course Prefix/Number**  
CHEM 401L

III. **Credit Hours**  
1

IV. **Prerequisites**  
CHEM 322 with C or better

V. **Catalog Description**  
A Laboratory to accompany CHEM 401 designed to complement the lecture.

VI. **Curricular Relationships**  
Required for BS Biochemistry degree, BA Chemistry (Allied Health) degree, and for BS Biology (Cellular and Molecular Biology). Chemistry 401, 401L, 402 is one of two optional sequences for the BS Chemistry degree. Many pre-professional students interested in the health sciences take this course.

VII. **Student Learning Outcomes**  
- Students will be able to successfully employ proper laboratory techniques and use instrumentation commonly encountered in biochemical laboratories.  
- Students will be able to collect, analyze, and interpret experimental data.  
- Students will be able to draw conclusions based upon their experimental data.  
- Students will demonstrate the ability to keep an effective lab notebook as a permanent record of work done in the laboratory.  
- Students will be able to write lab reports in the style of biochemical literature.  
- Students will be able to work effectively as members of groups in laboratory.

VIII. **Content Outline**  
- An experimental sequence culminating in a formal lab report. Lab notebook is also graded.  
- Two experimental sequences involving protein purification and characterization each culminating in a formal lab report. Lab notebook is also graded.  
- A project lab of the students’ choosing is undertaken culminating in a formal lab report. Lab notebook is also graded.
IX. Course Procedures/Policies/Grading Scale

Students are required to attend all laboratory sessions. Students work in teams in the laboratory. Two experimental sequences, each consisting of several experiments with a common focus are conducted during the semester. Students also complete a project chosen from possibilities provided by the instructor. A lab notebook must be kept and must be turned in for each experimental sequence and for the project. Each of the sets of experiments requires a formal laboratory report, written in the fashion of a biochemistry journal article.

Normal grading is used for this course.
Grading Scale:  >90 = A; 80-89 = B; 70-79 = C; 60-69 = D; <60 = F

X. Required/Recommended Readings

An in-house prepared laboratory manual is used for the laboratory portion of the course.

XI. Issues Unique to this Course

Because of time requirements/equipment needs for some experiments, students may have to utilize time other than scheduled laboratory hours to complete those experiments.

XII. Additional Departmental Issues

None